Order No. ACED060103C1
C4

Service Manual

AUTOMOTIVE AFTERMARKET

CR-W402U

FM/AM / Weather Band Receiver

SPECIFICATIONS

Specifications*

General	
Power Supply	**DC 12V (11V - 16V),** **Test Voltage 14.4V** **Negative Ground**
Tone Controls	**Bass ; ±12dB at 100Hz** **Treble ; ±12dB at 10kHz**
Current Consumption	**Less than 2.5A**
Maximum Power Output	**37W×4ch (at 1kHz, Vol. Max.)**
Suitable Speaker Impedance	**4-8**
FM Stereo Radio	
Frequency Range	**87.9 - 107.9MHz**
Usable Sensitivity	**11.0dBf (1.25 V, 75)**
AM Radio	
Frequency Range	**530 - 1,710kHz**
Usable Sensitivity	**28dB/ V (25 V, S/N 20dB)**
WB Radio	
Frequency Range	**162.40 - 162.55MHz**
Usable Sensitivity	**3dB (S/N 20dB)**
Signal to Noise Ratio	**50dB (40dB/ V)**
Dimensions**	**178×50×150mm**
Weight**	**1.4kg**

*** Specifications and the design are subject to possible modification without notice due to improvements.**
**** Dimensions and Weight shown are approximate.**

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1. ABOUT LEAD FREE SOLDER (PbF)

Distinction of PbF PCB:
PCBs (manufactured) using lead free solder will have a PbF stamp on the PCB.

Caution :

- Pb free solder has a higher melting point than standard solder; Typically the melting point is 50 - 70°F (30 - 40°C) higher. Please use a soldering iron with temperature control and adjust it to 700 ± 20°F (370 ± 10°C). In case of using high temperature soldering iron, please be careful not to heat too long.

- Pb free solder will tend to splash when heated too high (about 1100°F/ 600°C)

- This lead free solder will be used for the products after serial No. 1,000,001.

2. FEATUERS

- 18-FM, 6-AM presets with preset scan

3. REPLACEING THE FUSE

Use fuses of the same specified rating (15A). Using different substitutes or fuses with higher ratings, or connecting the product directly without a fuse, could cause fire or damage to the stereo unit.

4. MAINTENANCE

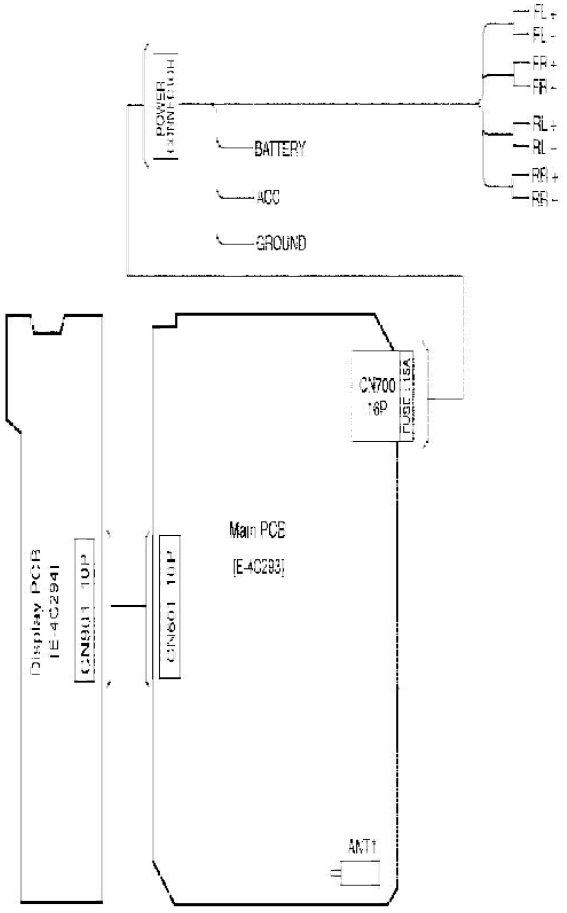
Your products is designed and manufactured to ensure a minimum of maintenance. Use a dry, a soft cloth for routine exterior cleaning. Never use benzine, thinner or other solvents.

5. NOTES

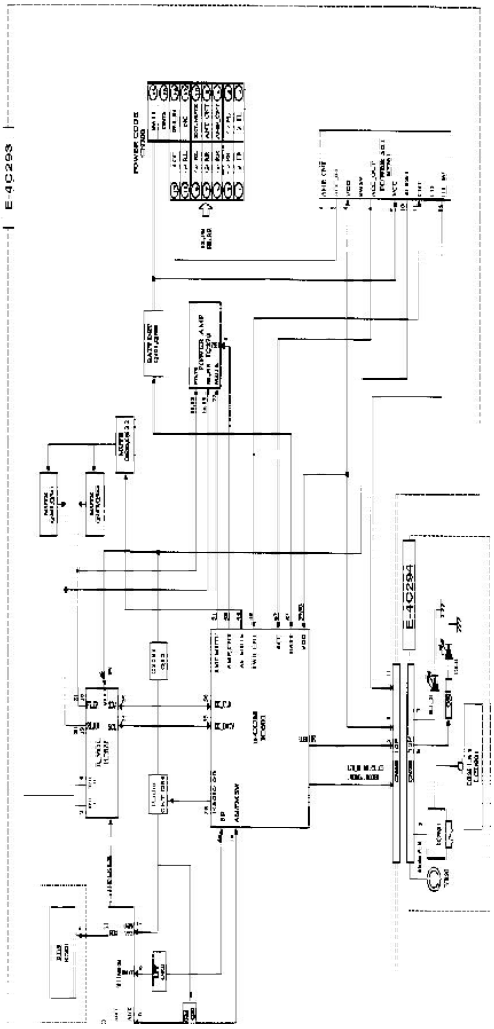
Do not align the AM/FM package block. When the package block is necessary, it will be supplied already aligned at the factory.

6. DIMENSIONS

7. WIRING CONNECTION



8. BLOCK DIAGRAM



9. TERMINALS DESCRIPTION

9.1. Main Block

IC601 : C2CBGF000216

Pin No.	Port	Description	I/O	FM(V)	AM(V)	WB
1	XIN	4. 5 MHz X'tal and Connection	I	2.4	2.49	2.49
2	TEST2	GND connection	I	0	0	0
3	VREG	Bypass condenser connected.	O	2.9	2.99	2.9
4	VSSCPU	GND connection	-	0	0	0
5	N.C.	None	-	-	-	-
6	N.C.	None	-	-	-	-
7	N.C.	None	-	-	-	-
8	N.C.	None	-	-	-	-
9	LCD_DO	LCD data output	I	5.1	5.17	5.13
10	LCD_DI	LCD data input	O	0	0	0
11	LCD_CLK	LCD clock	O	5	5.14	5.13
12	LCD_CE	LCD chip enable output	O	0.1	0.18	0.13
13	CD_DO	None	-	-	-	-
14	CD_DI	None	-	-	-	-
15	CD_CLK	None	-	-	-	-
16	CD_CE	None	-	-	-	-
17	CD_EM	None	-	-	-	-
18	CD_LM	None	-	-	-	-
19	CD_S/L	None	-	-	-	-
20	CD_WRQ	None	-	-	-	-
21	CD_INSW1	None	-	-	-	-
22	CD_SW2	None	-	-	-	-
23	CD_LIMIT_SW	None	-	-	-	-
24	CD_DRF	None	-	-	-	-
25	CD_RST	None	-	-	-	-
26	CD_DMUTE	None	-	-	-	-
27	N.C.	None	-	-	-	-
28	N.C.	None	-	-	-	-
29	PANEL	Panel detect	I	5.18	5.18	5.14
30	N.C.	GND connection	I	0	0	0
31	N.C.	GND connection	I	0	0	0
32	N.C.	GND connection	I	0	0	0
33	N.C.	None	O	0	0	0
34	N.C.	None	O	0	0	0
35	N.C.	None	O	0	0	0
36	N.C.	None	O	0	0	0
37	N.C.	None	O	0	0	0
38	N.C.	None	O	0	0	0
39	VDDPORT	Power supply of PORT	-	5.14	5.17	5.17
40	VSSPORT	GND of PORT	-	0	0	0
41	N.C.	None	-	-	-	-
42	N.C.	None	-	-	-	-
43	N.C.	None	-	-	-	-
44	N.C.	None	-	-	-	-
45	N.C.	None	-	-	-	-
46	N.C.	None	-	-	-	-
47	N.C.	None	-	-	-	-
48	N.C.	None	-	-	-	-
49	PWR_CNT	Power control	O	5	5.15	5.15
50	AMP_CNT	Amp stand-by	O	5	5.15	5.15
51	AMP_MUTE	Amp mute	O	5	5.15	5.17
52	N.C.	None	-	-	-	-
53	SSC	Tuner search sensitivity change	O	0.06	0.06	0.06
54	AF_MUTE	AF mute	O	5	5.17	5.17
55	I2C_DATA	Electronic VOL data	O	5	5.17	5.17
56	I2C_CLK	Electronic VOL clock	O	5	5.17	5.17
57	N.C.	None	-	-	-	-

Pin No.	Port	Description	I/O	FM(V)	AM(V)	WB
58	POWER_LED	Power LED	O	0.1	0.17	0.15
59	N.C.	None	-	-	-	-
60	N.C. (BZ_OUT)	None	-	-	-	-
61	N.C.	None	-	-	-	-
62	N.C.	None	-	-	-	-
63	N.C.	None	-	-	-	-
64	N.C.	None	-	-	-	-
65	N.C.	None	-	-	-	-
66	N.C.	None	-	-	-	-
67	BATT	Battery detection	I	5.2	5.33	5.29
68	MODE_B	ROTARY B input	I	5.1	5.1	5.1
69	N.C.	None	-	-	-	-
70	N.C.	None	-	-	-	-
71	MODE_A	ROTARY A input	I	5.1	5.1	5.1
72	N.C.	None	-	-	-	-
73	NC	None	O	0.03	0.03	0
74	MONO	Compulsion MONO ON	-	-	-	-
75	Radio on	Radio/CD change	O	0.06	0.06	8.3
76	FM/AM SW	AM/FM change	O	0.08	8.06	0.5
77	INIT_D	GND connection	I	0.1	0	0
78	INIT_C	GND connection	I	0	0	0
79	INIT_B	GND connection	I	0	0	0
80	INIT_A	GND connection	I	0	0	0
81	VSSADC	GND connection	-	0	0	0
82	N.C.	GND connection	I	0	0	0
83	ST	FM stereo input	I	5.3	5.25	1.5
84	SD_FM/AM	Signal detection	I	3.1	3.25	2.55
85	N.C.	GND connection	I	0	0	0
86	RESET	Reset Input	I	OFF	OFF	OFF
87	ACC	Power supply	I	5.3	5.37	5.3
88	N.C.	GND connection	I	0	0	0
89	N.C.	GND connection	I	0	0	0
90	FM/AM_IFC	FM/AM IF input	I	1.07	1.08	1.08
91	N.C.	GND connection	I	0	0	0
92	SUBPD	None	O	1.4	1.4	1.32
93	VDDPLL	Power supply of PLL	-	5	5.16	5.7
94	OSC_WB	None	I	0	0	1.39
95	OSC_FM/AM	FM/AM osc input	I	1.4	1.36	0
96	VSSPLL	None	-	0	0	0
97	N.C.	None	O	0.3	0.17	0
98	EO1	PLL phase comparison error output	O	1.4	1.4	1.33
99	TEST1	GND connection	I	0	0	0
100	XOUT	4. 5 MHz X'tal and Connection	O	2.5	2.56	2.62

Note 1 :

Voltage measuerments are with respect to ground, with a voltmeter (internal resistance : 10M ohms).

9.2. Display Block

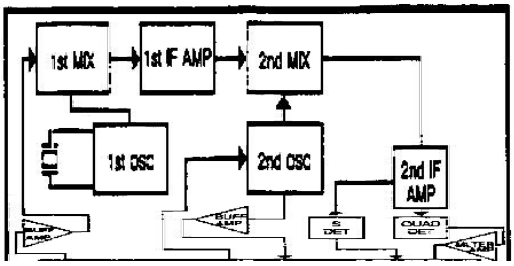
IC901 : YEAMLC75853NW

Pin No.	Port	Descriptions	I/O	(V)
1-27	SEG1-27	LCD segment	O	2.5
28-40	NC	No connection	-	-
41-43	COM1-3	LCD common	O	2.5
44-49	KS1-6	Key data output	O	0.9
50-54	KI1-5	Key data input	I	0
55	TEST	(Connecting to ground)	-	0
56	VDD	+5V power supply	-	5.1
57	VDD1	Ground through capacitor	-	3.3
58	VDD2	Ground through capacitor	-	1.7
59	Vss	Ground	-	0
60	OSC	CR oscillator	-	3.9
61	DO	Key data output	O	4.4
62	CE	Chip enable	I	0
63	CLK	LCD clock	I	0
64	DI	LCD data input	I	0

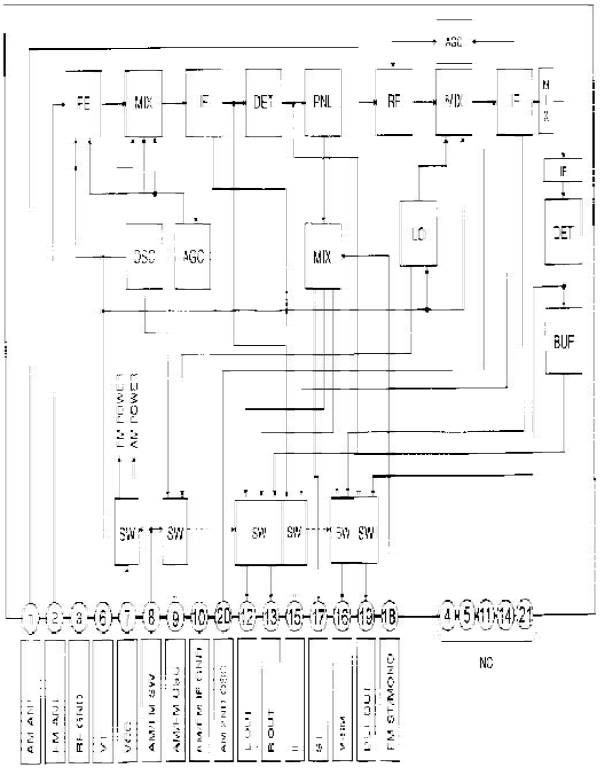
10. PACKAGE AND IC BLOCK DIAGRAM

10.1. Main Block

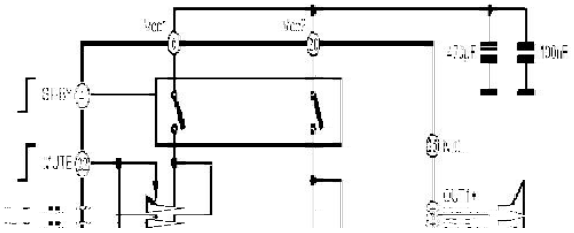
P40 : YEAU034CSU03



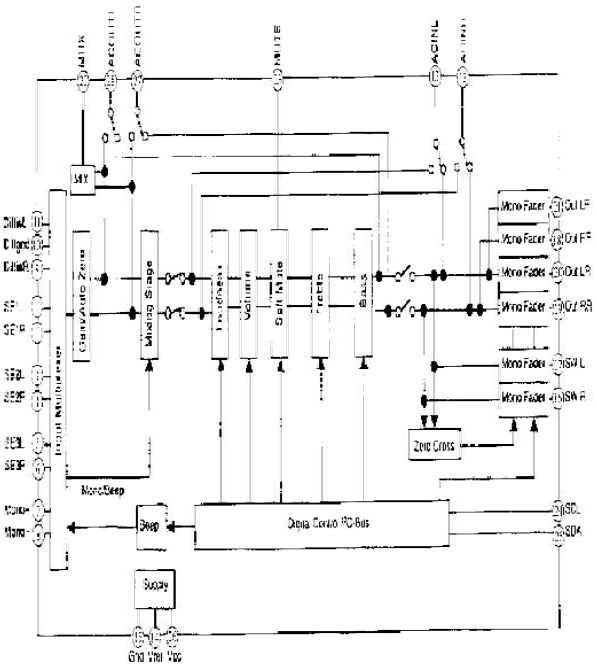
P50 : C5BA00000122



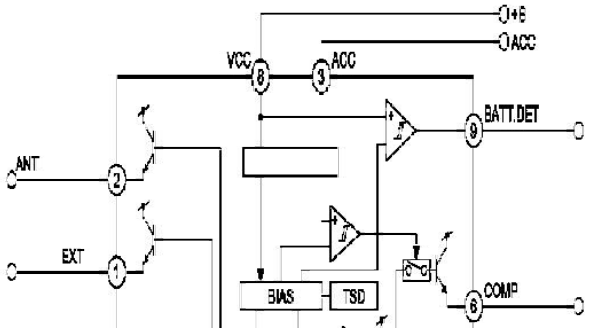
IC270 : C1EA00000042



IC300 : C1BB00000543



IC701 : C0DAZHH00004



11. REPLACEMENT PARTS LIST

Note:

1. Be sure to make your orders of replacement parts according to this list.
2. Important safty notice: Component , indentified by ⚠ mark have special characteristics important for safety. when replacing any of these components use only manufacturer's specified parts.
3. Location keys in the remarks column indicates the general location of the parts shown in the exploded drawing as in a road map.
4. The marking (RTL) indicates that Retention Time is limited for this item. After the discontinuation of assembly in production, the item will continue to be availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. At the end of this period, the assembly will no longer be available.
5. "T" marks in remarks colum are indicated supply parts of TAMACO.

* Order intake period is basically six months after the first shipment

Ref. No.	Part No.	Part Name & Description	Remarks
1. IC's and Transistors			
MAIN BLOCK [E-4C293]			
IC270	C1EA00000042	IC	T
IC300	C1BB00000543	IC	T
IC601	C2CBGF000216	IC	T
IC701	C0DAZHF00004	IC	T
P40	YEAU034CSU03	Weather Band Tuner Pack	T
P50	C5BA00000122	Tuner (W/B)	T
Q50	B1GDGFEH0001	Transistor	T
Q51	B1GDGFEH0001	Transistor	T
Q52	B1AAEC000002	Transistor	T
Q53	B1AAAF000002	Transistor	T
Q54	B1GDGFEH0001	Transistor	T
Q241	B1GBCFJA0002	Transistor	T
Q242	B1GBCFJA0002	Transistor	T
Q341	B1GBCFJA0002	Transistor	T
Q342	B1GBCFJA0002	Transistor	T
Q401	B1CAHF000003	Transistor	T
Q630	B1GCCFNN0005	Transistor	T
Q632	B1GCCFNN0005	Transistor	T
Q701	B1GCCFNN0005	Transistor	T
Q702	B1GACFCJ0003	Transistor	T
DISPLAY BLOCK [E-4C294]			
IC901	YEAMLC75853NW	IC	T
Q901	B1GDCFJJ0002	Transistor	T
2. Diodes			
MAIN BLOCK [E-4C293]			
D050	MA2C85600E	Diode	T
D051	MA2C85600E	Diode	T
D052	B0AADL000002	Diode	T
D053	B0AADL000002	Diode	T
D604	B0AAEE000004	Diode	T
D605	B0AAEE000004	Diode	T

Ref. No.	Part No.	Part Name & Description	Remarks
D610	B0AAEE000004	Diode	T
D706	B0BC6R700006	Diode	T
D707	YEAD1S40T	Diode	T
D708	YEADSR10A08G	Silicon Diode	T
D961	YEAD1N4005ST	Silicon Diode	T
D962	YEAD1N4005ST	Silicon Diode	T
D963	YEAD1N4005ST	Silicon Diode	T
D964	YEAD1N4005ST	Silicon Diode	T
D965	YEAD1N4005ST	Silicon Diode	T
D966	YEAD1N4005ST	Silicon Diode	T
D967	YEAD1N4005ST	Silicon Diode	T
D968	YEAD1N4005ST	Silicon Diode	T
Z700	ERZG07DK470T	ZNR	T
DISPLAY BLOCK [E-4C294]			
D900	B3ABB0000162	LED (GREEN)	T
D901	MAZ80560ML	Zener Diode	T
D902	MAZ80560ML	Zener Diode	T
D903	MAZ80560ML	Zener Diode	T
D904	MAZ80560ML	Zener Diode	T
D905	MAZ80560ML	Zener Diode	T
D919	B3AAB0000216	LED(RED)	T
D920	B3ABB0000224	LED (YELLOW GREEN)	T
D921	B3ABB0000224	LED (YELLOW GREEN)	T
D923	B3ABB0000224	LED (YELLOW GREEN)	T
D924	B3ABB0000224	LED (YELLOW GREEN)	T
D925	B3ABB0000224	LED (YELLOW GREEN)	T
D926	B3ABB0000224	LED (YELLOW GREEN)	T
D927	B3ABB0000224	LED (YELLOW GREEN)	T
D928	B3ABB0000224	LED (YELLOW GREEN)	T
D929	B3ABB0000224	LED (YELLOW GREEN)	T
D930	B3ABB0000224	LED (YELLOW GREEN)	T
D932	B3ABB0000224	LED (YELLOW GREEN)	T
			T
3. Capacitors			
MAIN BLOCK [E-4C293]			
C50	F1J1H471A733	Ceramic 470pF 50WV	T
C52	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C53	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C54	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C55	ECA1EM471B	Electrolytic 470PF 25WV	T
C56	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C57	F1J1H333A733	Chip 0.033pF 50WV	T
C58	F1J1H333A733	Chip 0.033pF 50WV	T
C59	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C60	F1J1H102A733	Ceramic 1000pF 50WV	T
C61	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C62	F2A1A101A354	Electrolytic 100pF 10WV	T
C63	F2A1H1R0A407	Electrolytic 1pF 50WV	T
C64	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C78	F1J1H682A733	Ceramic 6800pF 50WV	T
C79	F2A1A101A354	Electrolytic 100pF 10WV	T
C106	F2A1A101A354	Electrolytic 100pF 10WV	T
C107	F1J1H101A732	Ceramic 100pF 50WV	T

Ref. No.	Part No.	Part Name & Description	Remarks
C108	ECEA1VSN4R7IV	Electrolytic 4.7PF 35WV	T
C215	F2A1C100A401	Electrolytic 10pF 16WV	T
C218	F2A1H2R2A407	Electrolytic 2.2pF 50WV	T
C219	F2A1H2R2A407	Electrolytic 2.2pF 50WV	T
C220	F2A1H2R2A407	Electrolytic 2.2pF 50WV	T
C221	F2A1H2R2A407	Electrolytic 2.2pF 50WV	T
C249	F1J1H222A733	Chip 2200pF 50WV	T
C250	F1J1H222A733	Chip 2200pF 50WV	T
C271	ECQV1H224JL2	Plastic Film 0.22MFD 50WV	T
C272	ECQV1H224JL2	Plastic Film 0.22MFD 50WV	T
C293	F1K1C105A051	Ceramic 1MFD 16WV	T
C295	F1K1C105A051	Ceramic 1MFD 16WV	T
C316	F2A1H2R2A407	Electrolytic 2.2pF 50WV	T
C317	F2A1H2R2A407	Electrolytic 2.2pF 50WV	T
C320	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C349	F1J1H222A733	Chip 2200pF 50WV	T
C350	F1J1H222A733	Chip 2200pF 50WV	T
C371	ECQV1H224JL2	Plastic Film 0.22MFD 50WV	T
C372	ECQV1H224JL2	Plastic Film 0.22MFD 50WV	T
C380	F2A1H2R2A407	Electrolytic 2.2pF 50WV	T
C393	F1K1C105A051	Ceramic 1MFD 16WV	T
C395	F1K1C105A051	Ceramic 1MFD 16WV	T
C600	F1J1H220A732	Chip 22pF 50WV	T
C601	F1J1H220A732	Chip 22pF 50WV	T
C602	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C603	ECA1AM102B	Electrolytic 1000PF 10WV	T
C604	ECEA0JKA331BV	Electrolytic 330PF 6.3WV	T
C605	F1J1C105A173	Ceramic 1MFD 16WV	T
C607	F1K1H103A116	Ceramic 0.01MFD 50WV	T
C608	F1K1H101A153	Ceramic 100pF 50WV	T
C610	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C611	F1J1H102A733	Ceramic 1000pF 50WV	T
C612	F1J1H104A036	Ceramic 0.1MFD 50WV	T
C620	F1J1H101A532	Ceramic 100pF 50WV	T
C622	F1J1C105A173	Ceramic 1MFD 16WV	T
C623	F1J1H101A532	Ceramic 100pF 50WV	T
C630	F2A1H2R2A407	Electrolytic 2.2pF 50WV	T
C631	F2A1C100A401	Electrolytic 10pF 16WV	T
C669	ECEA1AKA221IV	Electrolytic 220PF 10WV	T
C702	EEAFC1A820H	Electrolytic 82PF 10WV	T
C703	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C704	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C705	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C706	ECA1CM102L	Electrolytic 1000PF 16WV	T
C707	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C708	ECEA1AKA221IV	Electrolytic 220PF 10WV	T
C709	ECEA1AKA221IV	Electrolytic 220PF 10WV	T
C710	F1J1H104A036	Ceramic 0.1MFD 50WV	T
C713	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C714	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C715	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C716	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C717	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C719	ECEA1AKA221IV	Electrolytic 220PF 10WV	T
C720	ECA1CDT472L	Ceramic 4700PF 16WV	T
C721	F2A1H2R2A407	Electrolytic 2.2pF 50WV	T
C722	F2A1H1R0A407	Electrolytic 1pF 50WV	T

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
C723	ECA1VM472C	Electrolytic 4700PF 35WV	T
C727	F2A1A101A354	Electrolytic 100pF 10WV	T
DISPLAY BLOCK [E-4C294]			
C901	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C902	F1J1H104A036	Ceramic 0.1MFD 50WV	T
C903	F1J1H103A733	Ceramic 0.01MFD 50WV	T
C904	F1J1H821A733	Ceramic 820pF 50WV	T
C905	F1J1H103A733	Ceramic 0.01MFD 50WV	T
4. Resistors			
MAIN BLOCK [E-4C293]			
J130	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J600	D0GDR00JA017	Chip 0 ohms 1/10W	T
J601	D0GD221JA017	Chip 220 ohms 1/10W	T
J603	D0GDR00JA017	Chip 0 ohms 1/10W	T
J604	D0GDR00JA017	Chip 0 ohms 1/10W	T
J605	D0GDR00JA017	Chip 0 ohms 1/10W	T
J606	D0GDR00JA017	Chip 0 ohms 1/10W	T
J610	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J612	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J613	D0GDR00JA017	Chip 0 ohms 1/10W	T
J614	D0GDR00JA017	Chip 0 ohms 1/10W	T
J624	D0GDR00JA017	Chip 0 ohms 1/10W	T
J625	D0GDR00JA017	Chip 0 ohms 1/10W	T
J626	D0GDR00JA017	Chip 0 ohms 1/10W	T
J627	D0GDR00JA017	Chip 0 ohms 1/10W	T
J628	D0GDR00JA017	Chip 0 ohms 1/10W	T
J650	D0GDR00JA017	Chip 0 ohms 1/10W	T
J652	D0GDR00JA017	Chip 0 ohms 1/10W	T
J653	D0GDR00JA017	Chip 0 ohms 1/10W	T
J718	F1J1H104A036	Ceramic 0.1MFD 50WV	T
J800	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J801	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J803	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J804	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J805	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J806	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J807	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J808	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J809	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J810	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J812	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J826	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J827	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J850	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J852	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J853	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J854	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J855	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J856	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J862	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J863	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J866	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J881	ERJ8GX0R00V	Chip 0 ohms 1/8W	T

Ref. No.	Part No.	Part Name & Description	Remarks
R1	D0AE823JA131	Chip 82k ohms 1/4W	T
R50	D0GD5R6JA052	Chip 5.6 ohms 1/10W	T
R51	D0GF332JA017	Chip 3.3k ohms 1/8W	T
R52	D0GF221JA017	Chip 220 ohms 1/8W	T
R53	D0GD822JA017	Chip 8.2k ohms 1/10W	T
R54	D0GD333JA017	Chip 33k ohms 1/10W	T
R55	D0AE102JA131	Chip 1k ohms 1/4W	T
R56	D0GD393JA017	Chip 39k ohms 1/10W	T
R58	D0GD472JA017	Chip 4.7k ohms 1/10W	T
R59	D0GD332JA017	Chip 3.3k ohms 1/10W	T
R60	D0GF332JA017	Chip 3.3k ohms 1/8W	T
R61	D0GD222JA017	Chip 2.2k ohms 1/10W	T
R62	D0GD224JA017	Chip 220k ohms 1/10W	T
R63	D0GF222JA017	Chip 2.2k ohms 1/8W	T
R64	D0GD561JA017	Chip 560 ohms 1/10w	T
R70	D0GD102JA017	Chip 1k ohms 1/10W	T
R71	D0GF123JA017	Chip 12k ohms 1/8W	T
R72	D0GF123JA017	Chip 12k ohms 1/8W	T
R102	D0GD152JA017	Chip 1.5k ohms 1/10W	T
R103	D0GD152JA017	Chip 1.5k ohms 1/10W	T
R104	D0GD152JA017	Chip 1.5k ohms 1/10W	T
R105	D0GF181JA017	Chip 180 ohms 1/8W	T
R208	D0GD102JA017	Chip 1k ohms 1/10W	T
R209	D0GD102JA017	Chip 1k ohms 1/10W	T
R241	D0GD103JA017	Chip 10k ohms 1/10W	T
R242	D0GD103JA017	Chip 10k ohms 1/10W	T
R261	D0AZ181JA008	Chip 180 ohms 1/6W	T
R262	D0AZ181JA008	Chip 180 ohms 1/6W	T
R271	D0GF561JA017	Chip 560 ohms 1/8W	T
R272	D0GF561JA017	Chip 560 ohms 1/8W	T
R341	D0GD103JA017	Chip 10k ohms 1/10W	T
R342	D0GD103JA017	Chip 10k ohms 1/10W	T
R361	D0AZ181JA008	Chip 180 ohms 1/6W	T
R362	D0AZ181JA008	Chip 180 ohms 1/6W	T
R371	D0GF561JA017	Chip 560 ohms 1/8W	T
R372	D0GF561JA017	Chip 560 ohms 1/8W	T
R600	D0GD473JA017	Chip 47k ohms 1/10W	T
R606	D0GD103JA017	Chip 10k ohms 1/10W	T
R607	D0GD103JA017	Chip 10k ohms 1/10W	T
R609	D0AE102JA131	Chip 1k ohms 1/4W	T
R612	D0GD473JA017	Chip 47k ohms 1/10W	T
R613	D0AE102JA131	Chip 1k ohms 1/4W	T
R616	D0AE102JA131	Chip 1k ohms 1/4W	T
R618	D0GD103JA017	Chip 10k ohms 1/10W	T
R619	D0AE102JA131	Chip 1k ohms 1/4W	T
R625	D0AE102JA131	Chip 1k ohms 1/4W	T
R629	D0AE473JA131	Chip 47k ohms 1/4W	T
R630	D0GD271JA017	Chip 270 ohms 1/10W	T
R634	D0GF682JA017	Chip 6.8k ohms 1/8W	T
R636	D0AE223JA131	Chip 22k ohms 1/4W	T
R637	D0GD473JA017	Chip 47k ohms 1/10W	T
R638	D0GD272JA017	Chip 2.7k ohms 1/10W	T
R642	D1HB1024A031	Chip 10.2M ohms 1/16W	T
R654	D0GF473JA017	Chip 47k ohms 1/10W	T
R660	D0GD102JA017	Chip 1k ohms 1/10W	T
R661	D0GD102JA017	Chip 1k ohms 1/10W	T
R662	D0GD104JA017	Chip 100k ohms 1/10W	T

[redacted]	[redacted]	[redacted]	[redacted]

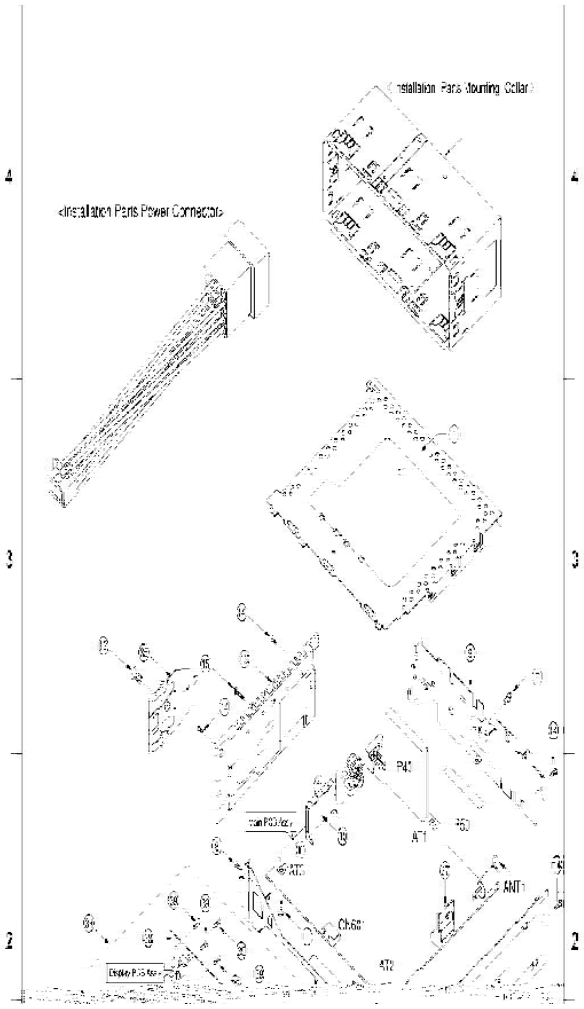
Ref. No.	Part No.	Part Name & Description	Remarks
R663	D0GD104JA017	Chip 100k ohms 1/10W	T
R682	D0AZ104JA008	Chip 100k ohms 1/6W	T
R701	D0AZ473JA008	Chip 47k ohms 1/6W	T
R702	D0GD153JA017	Chip 15k ohms 1/10W	T
R703	D0GD102JA017	Chip 1k ohms 1/10W	T
R705	D0GF333JA017	Chip 33k ohms 1/9W	T
R706	D0GD473JA017	Chip 47k ohms 1/10W	T
R709	D0GF332JA017	Chip 3.3k ohms 1/8W	T
R710	D0GD332JA017	Chip 3.3k ohms 1/10W	T
R711	D0AE104JA131	Chip 100k ohms 1/4W	T
R712	D0GD104JA017	Chip 100k ohms 1/10W	T
DISPLAY BLOCK [E-4C294]			
J901	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J902	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J903	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
J904	ERJ8GX0R00V	Chip 0 ohms 1/8W	T
R901	D0GD272JA017	Chip 2.7k ohms 1/10W	T
R902	D0GD683JA017	Chip 68k ohms 1/10W	T
R903	D0GD4R7JA056	Chip 4.7 ohms 1/10W	T
R904	D0GD102JA017	Chip 1k ohms 1/10W	T
R905	D0GD102JA017	Chip 1k ohms 1/10W	T
R906	D0GD102JA017	Chip 1k ohms 1/10W	T
R907	D0GD102JA017	Chip 1k ohms 1/10W	T
R918	D0GD391JA017	Chip 390 ohms 1/10W	T
R919	D0GD681JA017	Chip 680 ohms 1/10W	T
R920	D0GD561JA017	Chip 560 ohms 1/10w	T
R921	D0GD391JA017	Chip 390 ohms 1/10W	T
R922	D0GD151JA017	Chip 150 ohms 1/10W	T
R923	D0GD151JA017	Chip 150 ohms 1/10W	T
R924	D0GD561JA017	Chip 560 ohms 1/10w	T
R927	D0GD391JA017	Chip 390 ohms 1/10W	T
5. Connectors			
MAIN BLOCK [E-4C293]			
CN601	K1KA10B00185	Connector	T
CN700	K1FA116B0028	Connector	T
DISPLAY BLOCK [E-4C294]			
CN901	K1KB10A00006	Connector(10 PIN)	T
6. Electric Parts			
SWITCHES			
SW901	K0H1BA000445	Tack Swich	T
SW902	K0H1BA000445	Tack Swich	T
SW903	K0H1BA000454	Tack Swich	T
SW904	K0H1BA000445	Tack Swich	T
SW905	K0H1BA000445	Tack Swich	T
SW906	K0H1BA000445	Tack Swich	T
SW907	K0H1BA000445	Tack Swich	T
SW908	K0H1BA000445	Tack Swich	T
SW909	K0H1BA000445	Tack Swich	T
SW910	K0H1BA000445	Tack Swich	T

Ref. No.	Part No.	Part Name & Description	Remarks
SW911	K0H1BA000445	Tack Swich	T
SW912	K0H1BA000454	Tack Swich	T
Surge Protector			
Z52	D4ZZ00000024	Surge Protector	T
VR			
VR901	K9AA024A0014	Encoder	T
COILS			
L50	G0C150JA0044	Axil Coil	T
L52	G0C8R2K00006	Axil Coil	T
L51	G1CR56JA0036	Coil	T
L801	G1C100J00001	Coil	T
L700	YETQ024C065V	Choke Coil	T
CRYSTAL			
XL601	H0A450000001	Crystal	T
LCD			
LCD901	YEXDCM4C126	LCD	T
7. Accessories			
PRINT			
	YFM284C538CA	Operating Instructions	T
INSTALLATION PARTS			
	FX0214C079YA	Mounting Collar	T
	YAJ024C120CA	Power Connector	T
	YFG044C002ZA	Rear Support Strap	T
	FP-164-J	Screw Kit	T
8. Mechanical Parts			
MISCELLANEOUS			
ANT1	YAA104C700ZA	ANT JACK	T(2C)
AT1	YAT034C009ZA	Terminal	T(2C)
AT2	YAT034C009ZA	Terminal	T(2C)
AT3	YAT034C009ZA	Terminal	T(2B)
1	YFA034C035YC	Upper Cover	T(3C)
6	XTW2+5FFN	Screw	T(2B)
7	YEJV014C002N	Bolt	T(3C)
8	XTN2+3FFZ	Screw(M2X3)	T(2B)
9	YFA084C060CA	Rear Plate	T(3C)
10	YFX214C403CA	IC Bracket	T(2B)
11	YEJT034C001N	Screw	T(2B)
12	XSS5+6FN	Screw	T(3A)
13	YJT034C706FN	Screw	T(2C)
14	XTB3+6FFN	Screw	T(3B)
15	YEJT034C019N	Screw(CUP TIGHT 3X12)	T(3B)
16	YFF014C054CA	Heat Sink	T(3B)
17	YFA074C049CA	Front Plate	T(2B)

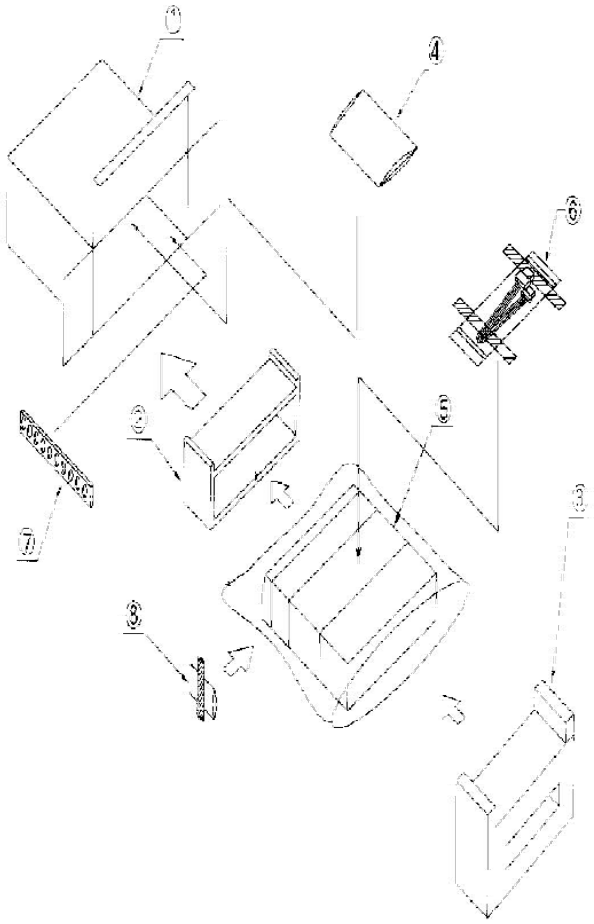
Ref. No.	Part No.	Part Name & Description	Remarks
21	YFX014C088ZA	Back Light Assy	T(2B)
22	YFV024C104ZA	Sheet	T(2B)
23	FX0214C350XA	LCD Bracket	T(2A)
25	YFE134C503CB	Button(DISP)	T(1B)
26	YFE134C327ZB	Button(SEEK/TUNE)	T(1A)
27	YFE134C504CA	Button(PRESET)	T(2A)
28	YFC034C014CA	Escutcheon	T(1A)
29	YFE134C502CB	Button(MUTE)	T(2A)
30	YFE134C516CA	Button(BAND/SRC)	T(1B)
31	YFS014C065YA	Rubber Gum	T(2A)
32	YFE074C067CA	Vol Knob Assy	T(2A)
33	APCB294A0-J	Key PCB Assy	T(2A)/RTL
34	ESCW402U-J	ESC Assy	T(2A)/RTL
35	FX0054C030ZA	Spring Plate	T(2C)
36	YFA094C098CA	Right Plate	T(2C)
37	YFX214C357ZA	TR Bracket	T(2C)
38	APCB293A0-J	Main PCB Assy	T(2B)/RTL
39	XTB2+6GFN	Screw	T(2B)
40	YFA054C044CA	Bottom Cover	T(1C)

12. EXPLODED VIEW (Unit)

■ Numbers in ○ are indicated REF.No.in the REPLACEMENT PARTS LIST



13. PACKING PARTS LIST



.Item numbers listed below should not order reguler spare parts. (not available)

Item No.	Part No.	Part Name & Description	Q'ty	Remarks
1	---	Inner Carton	1	Not available
2	---	Packing Pad Front	1	Not available
3	---	Packing Pad Rear	1	Not available
4	---	Printing Kit	1	Not available
	YFM284C538CA	Operating Instructions	(1)	
5	FX0214C079YA	Mounting Collar	1	
6	YAJ024C120CA	Power Connector	1	
7	YFG044C002ZA	Rear Support Strap	1	
8	FP-164-J	Screw Kit	1	

14. WIRING DIAGRAM

14.1. Main Block-1

14.2. Main Block-2

14.3. Display Block

15. SCHEMATIC DIAGRAM-1

15.1. Main Block

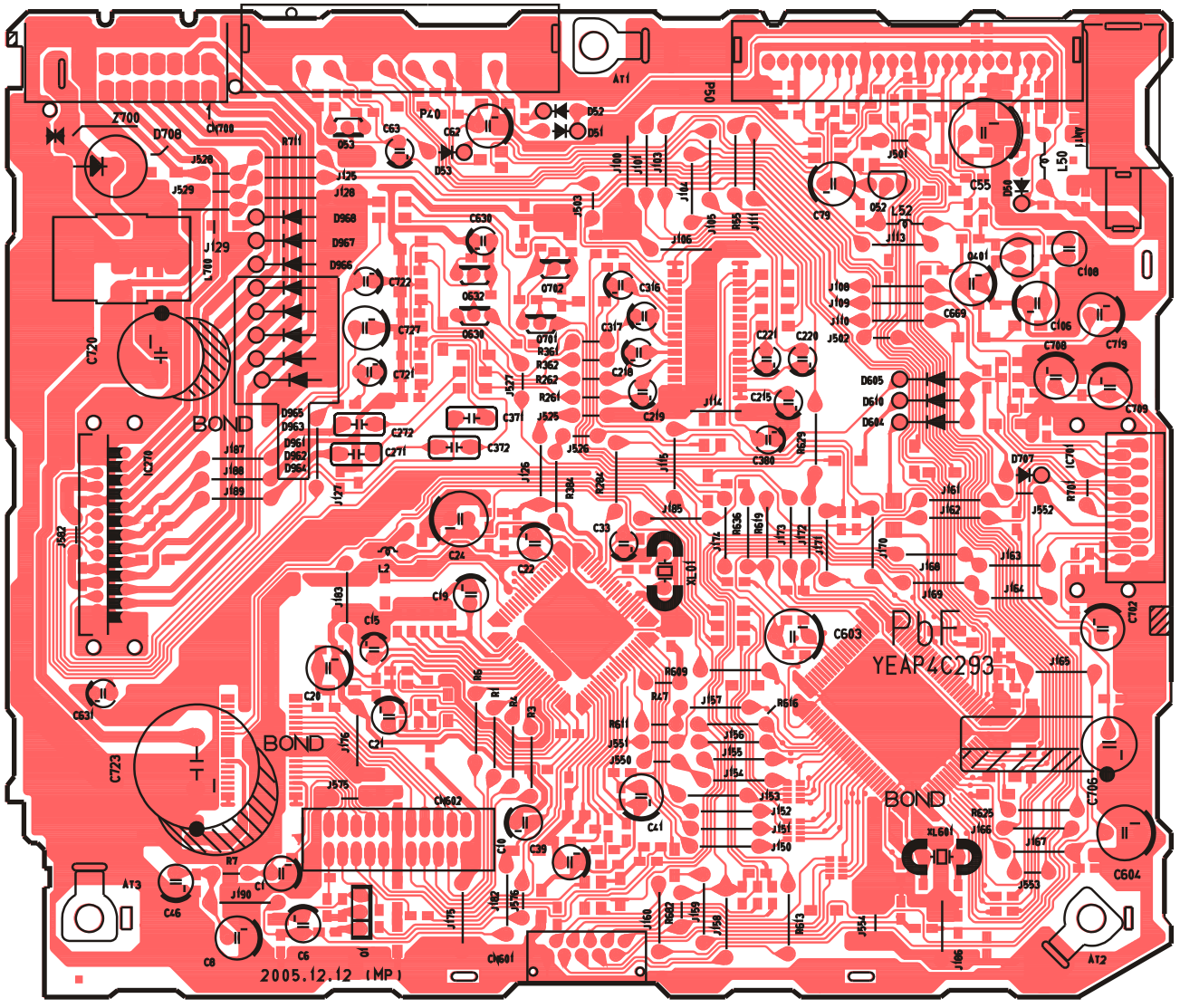
15.2. Display Block

16. SCHEMATIC DIAGRAM for printing with Letter size

16.1. Main Block (Left Side)

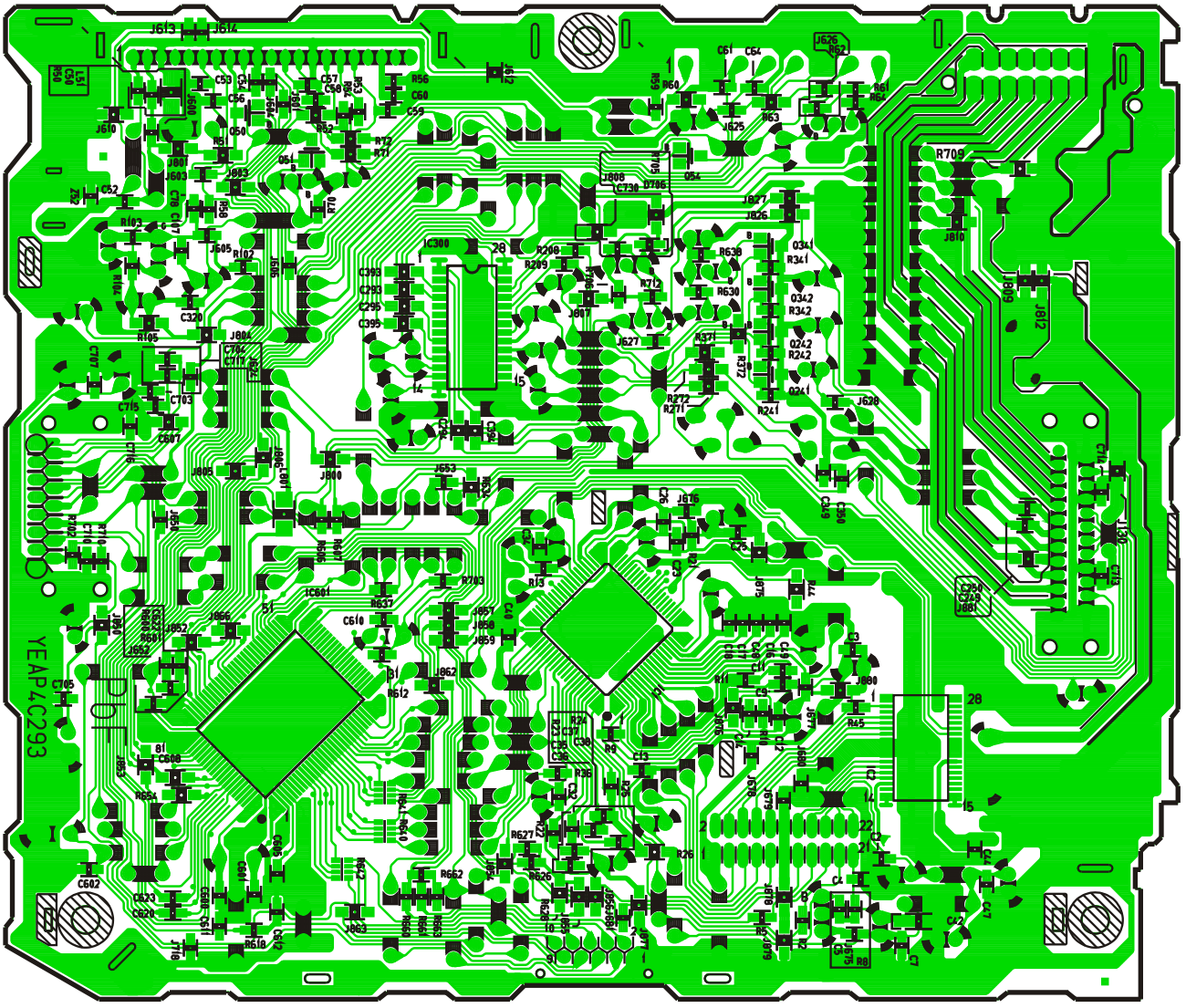
16.2. Main Block (Right Side)

/ Printed in Taiwan / 2005.06



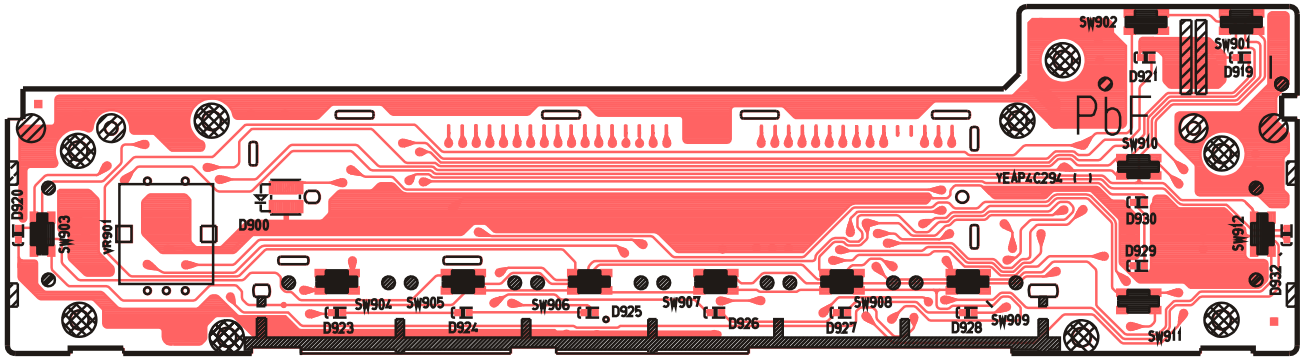
[E-4C293][TOP VIEW]

CR-W402U MAIN PCB

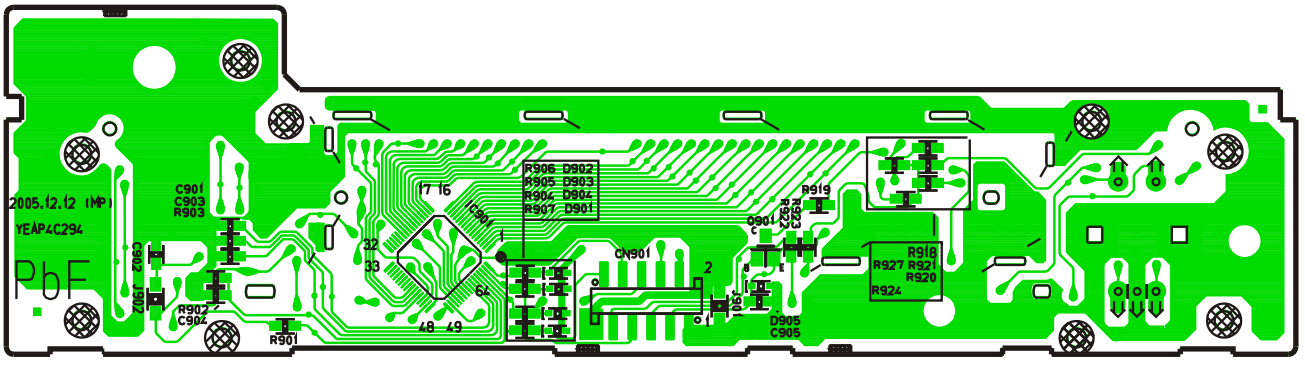


[E-4C293][BOTTOM VIEW]

CR-W402U MAIN PCB

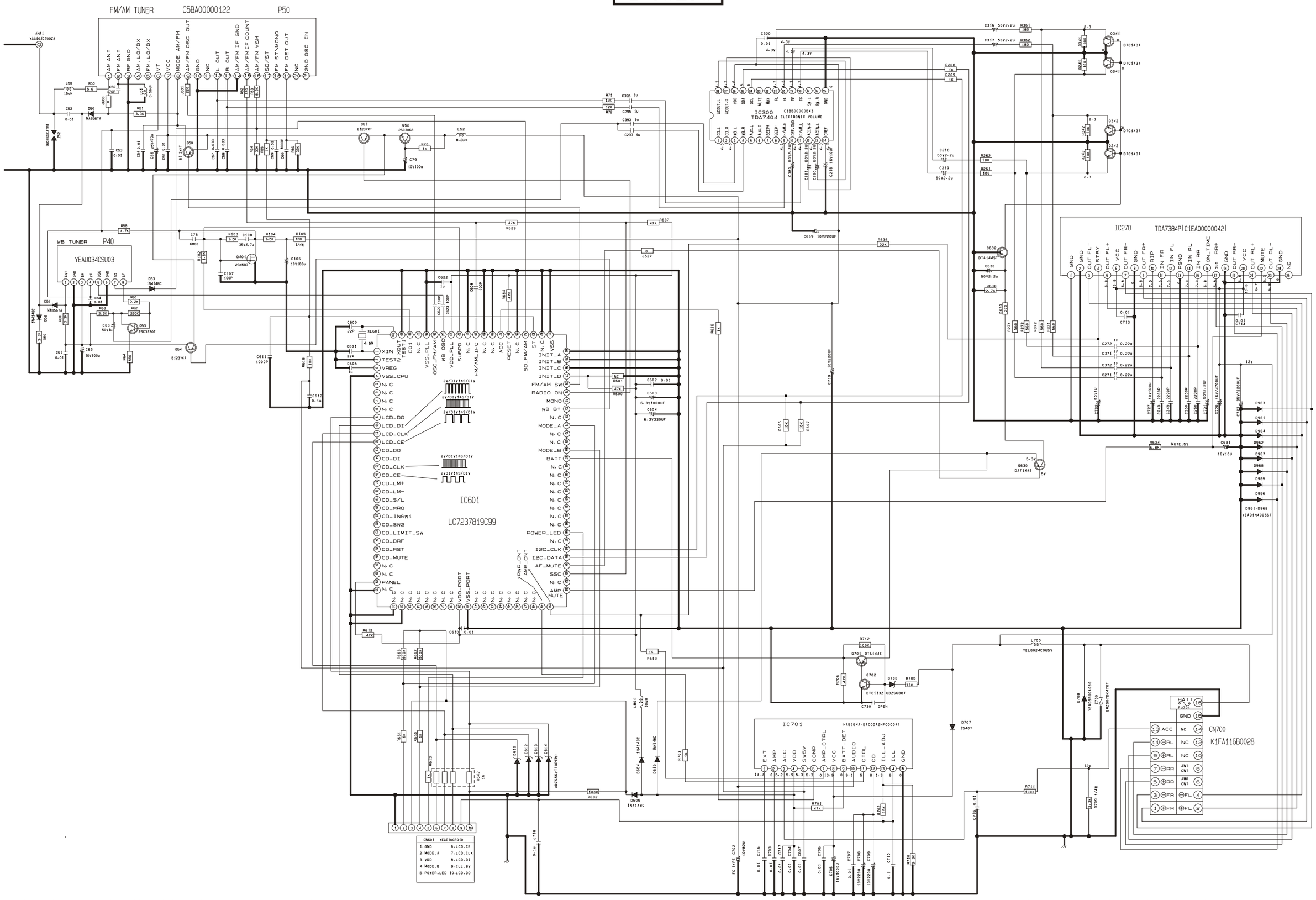


[E-4C294][TOP VIEW]



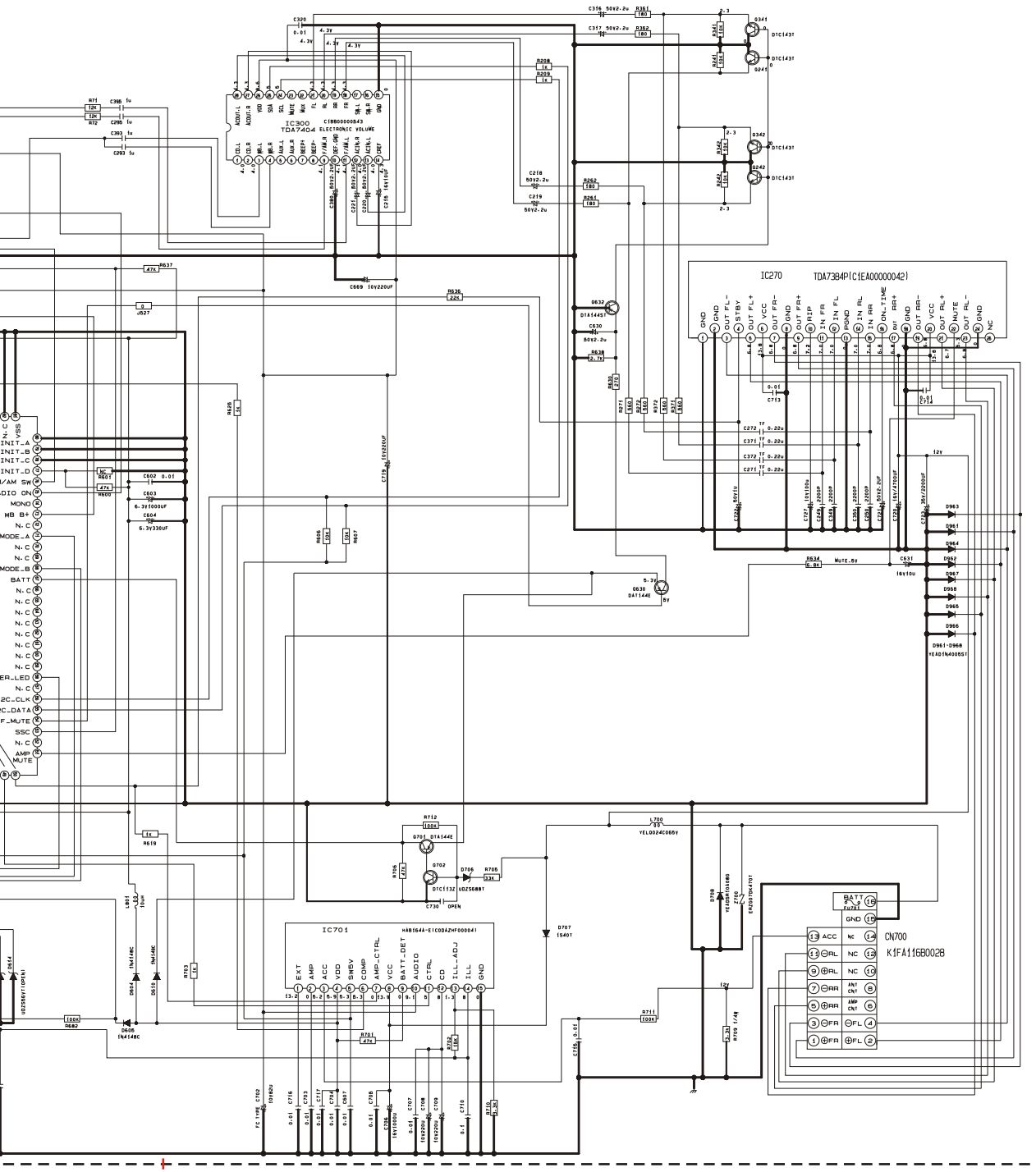
[E-4C294][BOTTOM VIEW]

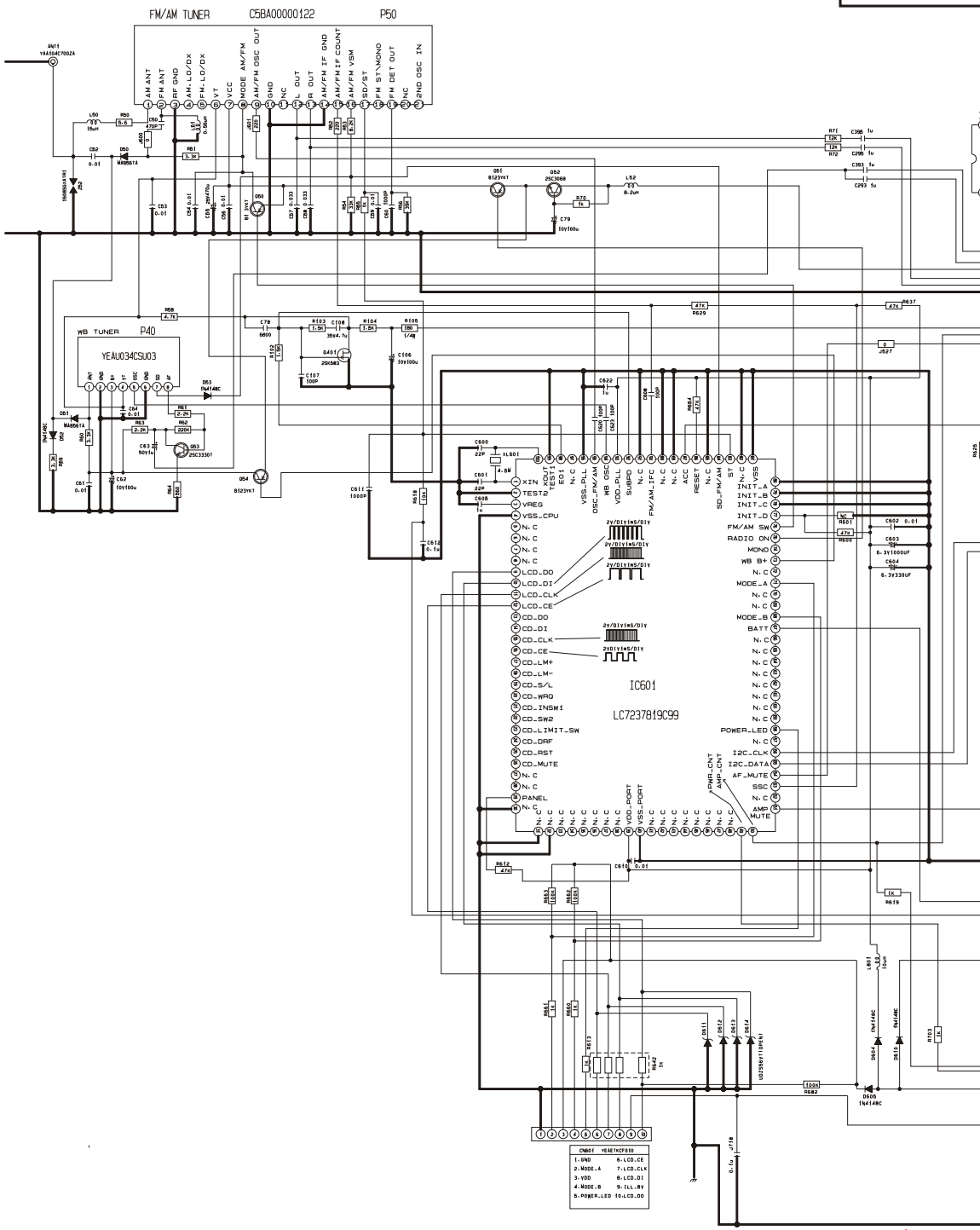
E-4C293

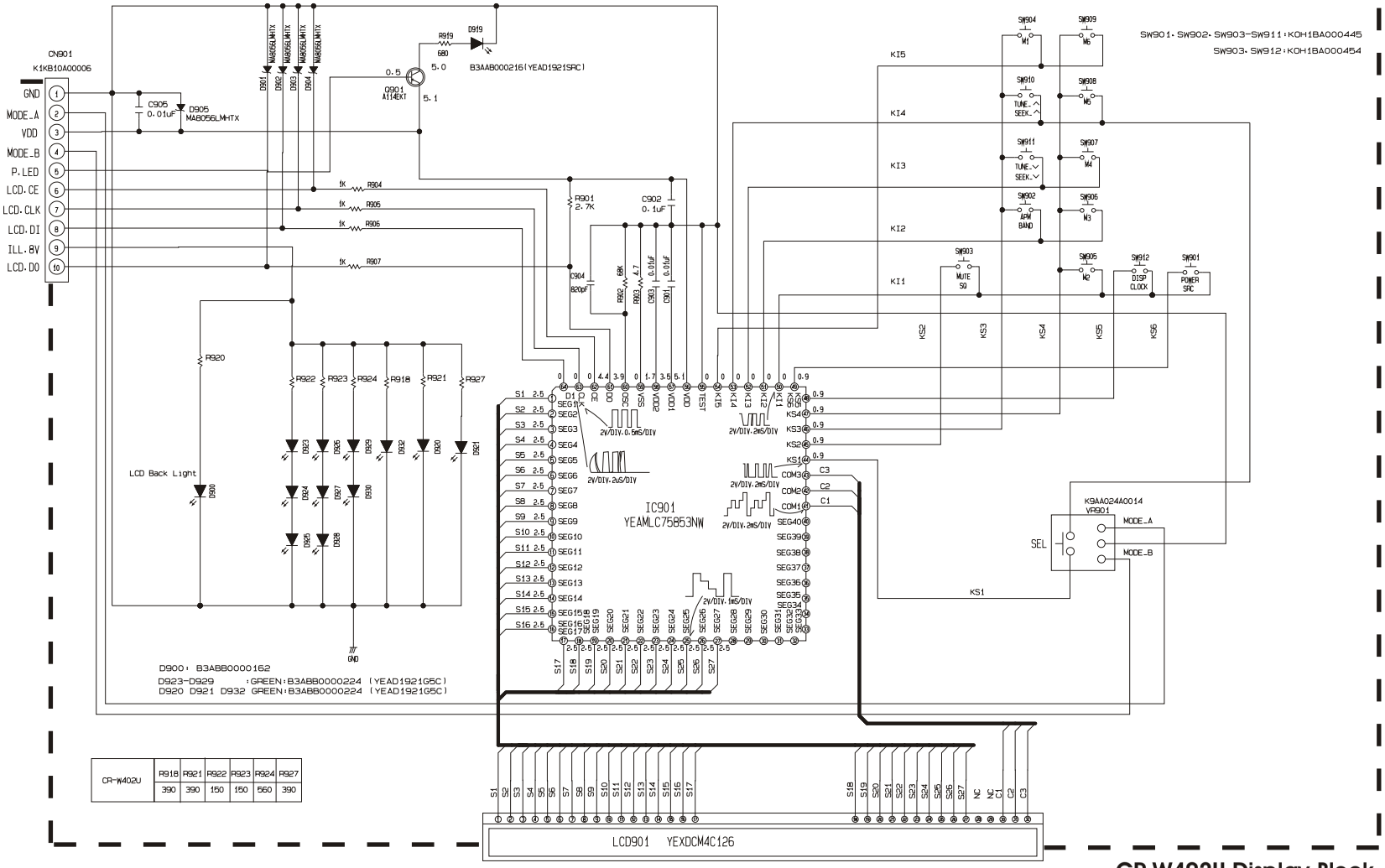


CR-W402U Main Block

E-4C293


IC270
TDA7384P(C1EA00000042)
IC300
TDA7404 ELECTRONIC VOLUME
IC701
CN700
K1FA116B0028
CR-W402U Main Block


FM/AM TUNER C5BA00000122 P50
WB TUNER P40
YEAU034CSU03
IC601
LC7237819C99
CN601 YEAE1KCF010



CR-W402U	R918	R921	R922	R923	R924	R927
	390	390	150	150	560	390

CR-W402U Display Block